PROCEEDINGS

OF THE

BIOLOGICAL SOCIETY OF WASHINGTON

PUBLICATION STANDARDS IN VERTEBRATE PALÆONTOLOGY.

BY HENRY FAIRFIELD OSBORN.

AMERICAN STANDARDS OF PUBLICATION.

The founders of Vertebrate Palæontology in America, Leidy, Marsh, and Cope, fortunately set a high and uniform standard in publishing the taxonomic divisions of species, genera, and the higher grades. Leidy published uniformly in the Proceedings and Journals of the Academy of Natural Sciences of Philadelphia, chiefly in the form of written reports of his verbal communications to the regular meetings of the Academy. Marsh published uniformly in the American Journal of Science and Arts, which, since its foundation by Benjamin Silliman, has enjoyed a world-wide reputation and distribution. He published some of his higher taxonomic divisions in the Memoirs ODONTORNITHES and DINOCERATA of King's Survey of the Fortieth Parallel. Cope's systematic lists and contributions were much more widely scattered but chiefly appeared in the Proceedings and Transactions of the American Philosophical Society and in the Reports of Hayden's Survey of the Territories and of Wheeler's Survey; also subsequently in the publications of the Geological Survey of Canada for the period during which he was Palæontologist. During his editorial period of the American Naturalist, from 1877 to 1897, he used this Journal widely; and during the very active period of his exploration of

¹Osborn, H. F. "Biographical Memoir of Joseph Leidy 1823-1891," Nat. Acad. Sci. Biog. Mems., Vol. VII, pp. 339-370, with Bibliography, pp. 370-396, 1913.

²Osborn, H. F. "Biographical Memoir of Edward Drinker Cope 1840-1897." With Bibliography revised by Miss Jannette M. Lucas from manuscript of Miss M. A. Brown, with scientific annotations by Dr. William D. Matthew (vertebrate palæontology) and by Mr. Walter B. Veazie (herpetology). In preparation.

the Eocene of the Bridger, Washakie, and Wasatch basins, he used the Proceedings of the American Philosophical Society, issuing forty Bulletins, which were brought together, printed, and dated in advance of the regular Proceedings—dates which formed the subject of a dispute between Marsh and himself. Bulletin No. 12, entitled "On Some Eocene Mammals, Obtained by Hayden's Geological Survey of 1872 . . . (Read before the American Philosophical Society,, 1873.)" was issued in the same way but was not included in a subsequent printing of the Proceedings. Cope, to the despair of editors, of proof-readers, and of the succeeding generation of systematists, on two occasions published specific names in the explanation of plates, where certainly no one would look for them. These, however, seem to be the glaring exceptions to an otherwise regular practice.

Scott and Osborn, of the next generation, began publishing in the Bulletins of the E. M. Museum of Geology and Archæology of Princeton College, in the Proceedings of the American Philosophical Society, and in the Bulletins of the Museum of Comparative Zoology at Cambridge. Scott has continued to publish in the Proceedings of the American Philosophical Society, and Osborn since 1892 has been publishing uniformly in the Bulletins and Memoirs of the American Museum of Natural History.

All the media of publication above named have had a large circulation and a world-wide distribution, so that it may be said that the uniform and high standard originally set by vertebrate palæontologists has been maintained to the present day. With the multiplication of publications by museums as well as by universities in various parts of our country, it is desirable to agree as to future standards of world-wide distribution and accessibility, also of printing on permanent paper in permanent form, with illustrations printed on permanent paper rather than on the temporary coated paper so often used nowadays.

EUROPEAN STANDARDS OF PUBLICATION.

In connection with a complete revision of the Proboscidea, on which the present writer has been especially engaged during the past three years, in pursuance of researches begun in the year 1907, it has been necessary to consult upwards of 500 titles, certain of which could not be found in any American library. It appears that in the order Proboscidea all systematic genera and species since 1735 have been published either in the regular or special publications of learned societies, or in serial journals, or in standard memoirs, or in volumes regularly placed on sale, such, for example, as the successive editions of Blumenbach's "Handbuch der Naturgeschichte." In this manner a total of 276 species and 53 genera of the Proboscidea alone have been described, and there is thus the precedent of nearly two centuries in the Old World and of nearly three-quarters of a century in the New World for the publication of systematic lists in a manner which will be permanent.

STANDARDS OF PUBLICATION IN BOOKS AND BROCHURES.

While the International Commission on Zoological Nomenclature is very positive in the matter of publication and priority, it does not declare itself expressly as to standard media of publication, except in repeated reference to "serials." As to the standards which must be observed in publications other than serials, we may quote from a letter recently received from C. Davies Sherborn, author of the *Index Animalium*, since 1896 a member of the British Association Committee on Zoological Bibliography and Publication, and acknowledged to be the highest authority in the world to-day in a field to which he has devoted the best part of a lifetime. He writes (letter December 2, 1922):

"Privately printed and privately issued books are not valid. [Italics our own.] To be valid must have publishers name upon them (& should have a price). Public sale is the essential test. Exception should be made to those works issued by Public Institutions for Exchange or wide distribution, e. g. Smithsonian and similar Inst. In old days the case was different. Pallas' Zoogr. Rosso-Asiat. 1811 was issued (owing to internal troubles) by the author to a score of the first naturalists of Europe, & as this was the only then means of making it known, the work should be accepted. Personally it is my business to record & tell you where a G. or sp. is to be found, but if and when I quote from a privately printed book I mark the entry (Auct. Typ.) In this connection, I would bar all newspapers, even 'Nature' and 'Science' for new Generic or specific names. But here you are at once confronted with the question What is a newspaper?"

¹⁰sborn, H. F. "A Mounted Skeleton of the Columbian Mammoth (Elephas columbi)." Bull. Amer. Mus. Nat. Hist., Vol. XXIII, Art. XII, Mar. 30, 1907, pp. 255-257.

A letter dated August 21, 1922, from Dr. F. A. Bather of the British Museum and Secretary of the British Association Committee on Zoological Bibliography and Publication declares the same standard:

"I think I may venture to write as Secretary of the British Association Committee on Zoological Bibliography and Publication, since my committee discussed this question some 25 years ago and has always been in emphatic agreement on the subject. Also as a member of the International Commission of Zoological Nomenclature, I am able to say that the Commission fully agrees with the attitude and proposals of the British Association Committee. I fully agree with you in rejecting. [referring to a privately printed and issued paper] because it is to all appearances issued privately and bears no place of publication, no publishers name, and no price; in other words the presumption is that the pamphlet (and consequently the names within it) is not published. [Italics our own.] The rules of the International Commission on Zoological Publication say (Article 25): 'the valid name of the genus or species can only be that name under which it was first designated on the condition; (a) that this name was published etc.' The question arises, what is meant by publication? This has often been discussed, and the general conclusion is well summarised by Sherborn 'Index Animalium,' vol. I, p. vi, where he defines it as 'Offered for public sale or public distribution.' The words 'public distribution' are necessary, because if it were limited to 'public sale' many valuable works issued by the Smithsonian Institution and the United States Government would, I am informed, be excluded, since they are not sold at a price."

Professor C. W. Stiles, Secretary of the International Commission on Zoological Nomenclature, Washington, D. C., adopts the same standard (letter September 12, 1922):

"It is difficult for me to judge the case without having the paper and without knowing whether it is on sale. My idea would be that a paper must be generally accessible to the public; if privately distributed, and not on sale, it would not be publication, so far as I see. If actually on sale, it would appear to have the same status as a book. New names in books are accepted. For instance, the standard works of 1808, 1809, 1810, 1819, 1845, 1850 and 1851, on parasites are books and their published status has never been questioned. Linné, 1758, Systema naturae is a book, not a periodical. A book or paper, privately distributed, hence not on sale, I would ignore entirely, in respect to nomenclature." [Italics our own.]

Also Dr. Theo. D. A. Cockerell of the University of Colorado (letter August 27, 1922) maintains the same standard:

"On the other hand the rules require,—and I think very properly—that a work shall be placed on sale. It is obvious that if any one is at liberty

to print a few copies of a work, and send them only to his friends, there is no publication in the genuine sense of the word. A scientific work, to be published, must be available to any one who is willing to purchase it at the published price. We may some day have to require that that price shall not be exorbitant."

The standard form of publication in vertebrate palæontology in America is in serials. Privately issued brochures and books are without precedent; they do not constitute publication, unless placed on sale. They are not a standard. The serial form of publication is the only one which meets modern conditions and the present world-wide expansion of vertebrate palæontology.

STANDARDS OF THE BRITISH ASSOCIATION FOR THE ADVANCE-MENT OF SCIENCE.

The Committee of the British Association on Zoological Bibliography and Publication, Dr. F. A. Bather, Secretary, issued (London, 1896) the following seven rules:

"(1) That each part of a serial publication should have the date of actual publication, as near as may be, printed on the wrapper, and when possible, on the last sheet sent to press. (2) That authors' separate copies should be issued with the original pagination and plate-numbers clearly indicated on each page and plate, and with a reference to the original place of publication. (3) That authors' separate copies should not be distributed privately before the paper has been published in the regular manner. . .

4. That it is desirable to express the subject of one's paper in its title, while keeping the title as concise as possible. 5. That new species should be properly diagnosed and figured when possible. 6. That new names should not be proposed in irrelevant footnotes, or anonymous paragraphs. 7. That references to previous publications should be made fully and correctly, if possible in accordance with one of the recognized sets of rules for quotation, such as that recently adopted by the French Zoological Society."

These rules were distributed for comment and discussion and elicited the following supplementary rule (Toronto, 1897) regarding *sale* and distribution:

"In cases where a volume or part can only appear at long intervals, each author that requires separate copies of his paper for private distribution before its publication in the volume or part should be permitted them only on this condition—that, for every month before the probable issue of the volume, a certain number of copies—say five—should be placed by him in the hands of the society or its accredited publisher, in order that they may be offered for sale to the public at a fixed price. Further, that the society,

for its part, should announce the publication, with price and agent, of their papers to some recognized office, or to some such paper as the 'Zoologischer Anzeiger.' The details of expense must be settled between the author and the society."

Subsequent reports of the same Committee have been issued, namely, Newcastle, 1916, London, 1920, Edinburgh, 1921, full of valuable matter to zoologists, bibliographers, and publishers, copies of which have been kindly furnished the present writer by Dr. F. A. Bather of the British Museum.

Publication in Journals and Newspapers not Standard.

The British authorities tacitly or openly strictly advise against such publication even in standard journals like "Nature" or "Science." New lists of systematic description should be issued where scientific workers the world over may expect to find them and not in a casual way. This is a natural right. It is also a natural right that new names should be accompanied by figures. It is also essential that names, descriptions, and figures should be printed on *permanent* paper which will last for centuries. It is finally essential that prompt or immediate distribution of not less than four hundred copies should be made of the serial or of the reprints. This is the standard circulation of scientific publications at the present time.

Permanence both of the text paper and of the plate paper on which text figures appear is a new standard of the utmost importance affecting publication under modern conditions of wood pulp and glazed papers which have replaced the permanent rag papers of early writers. The beauty and clearness of both the plates and text in such ancient works as those of Blumenbach ("Handbuch der Naturgeschichte") and of Cuvier ("Recherches sur les Ossemens Fossiles," editions of 1812, 1821-1824, 1834-1836) show the great advantage of using permanent plate and printing materials. Imagine the condition of zoology one hundred years hence if the printing of new species in an afternoon edition of a newspaper, which crumbles to dust in a few months, were permitted.

American Museum Natural History, New York City, December 21, 1922.